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ABSTRACT

This methodological paper concentrates on the role of education in meeting employment objectives in developing cities. Section 1 reviews briefly main results of the significant amount of existing basic research on the issue of education and employment. The second section then briefly reviews policy-oriented documentation to answer the question, What is the nature of the policy suggestions developed by policy-oriented planning institutions and on what type of methodology and data are they based? These policy concerns on education and employment are classified into four broad categories: the relevance of education to social and economic development, education and productive work, the mismatch between school curriculum and available jobs, and youth unemployment. On the basis of these two reviews the third section then develops a single research methodology for answering relevant policy questions being asked by planners. Proposed methodologies answer simultaneously the questions of the nature of and educational level associated with unemployment. They include (1) review of census data and other surveys, (2) cross-section employment surveys, (3) tracer studies, and (4) evaluation of special programs. (YLB)

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EDUCATION AND EMPLOYMENT : A METHODOLOGY FOR LOCAL POLICY RESEARCH

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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- Education as Cultural Imperialism (New York : David Mckay and Co. 1974)
- Cost-Benefit Analysis in Education: A case study of Kenya (World Bank and John Hopkins Press, 1972)

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FOREWORD

Unesco's General Conference at its 19th session (Nairobi, Kenya, 1976) resolved that the Secretariat give particular attention to "gathering and disseminating information about new educational policies for the renewal of educational systems, adapted to specific needs on the basis of particular social, economic and cultural situations and aimed at promoting democratization of the systems within the framework of life-long education" (Programme Resolution 1.111).

In line with this mandate the Division of Educational Policy and Planning began in 1977 reproducing selected technical papers and distributing them as a series under the general title: "Reports, Studies ...". The aim of this series is to stimulate reflection and discussion on current issues confronting educational policy-makers, planners, administrators and school architects. Distribution is limited to Unesco officials at Headquarters and in the field, as well as interested technical personnel in governmental and private institutions. It is hoped that this series will promote and serve as a vehicle for increasing communication between individuals and institutions concerned with policy and planning aspects of education.

The "Reports, Studies ..." series consists of two sub-series : (i) papers with a subject orientation (numbered S.1, S.2, etc.) and (ii) papers focusing on a given country (numbered C.1, C.2, etc.). Subject papers deal with such topics as educational policies and legislation, planning and management techniques, planning and design of educational space and facilities, the relationship of education to productive work and employment, inter-country cooperation, the role of education in respect of the New International Economic Order, etc. Country papers are either brief profiles of the educational system of a particular country (mainly the LDCs) or treat a specific reform or aspect of the country's educational system.

Some of the papers reproduced in the series are "desk studies" based on information available within Unesco, others were originally prepared as background or discussion papers for a meeting or seminar, while still others are personal position papers representing part of a continuous dialogue within the Unesco Secretariat.

Papers are selected for the series on the basis of their topical interest. Readers should bear in mind that many, if not most, of the papers are working documents, unedited and not intended for public distribution. Some of the authors have written in a language other than their mother tongue, which explains certain linguistic deficiencies. It must also be stressed that the papers present the ideas of their respective author and do not necessarily reflect the policies of Unesco.

The Division of Educational Policy and Planning welcomes comments and suggestions concerning the series and invites readers to make known their reactions to particular ideas presented or to entire papers. In certain cases it may be possible to reproduce such comments and reactions in a subsequent issue of the series. For the convenience of readers who may wish to contact the author of a paper, the current contact address is given whenever possible.

AVANT PROPOS

La Conférence Générale de l'Unesco, lors de sa 19e session (Nairobi, Kenya, 1976) a décidé que "la collecte et la dissémination de l'information sur les nouvelles politiques d'éducation pour le renouvellement et la réforme des systèmes d'éducation adaptés aux besoins spécifiques basés sur des situations sociales, économiques et culturelles particulières et qui ont comme objectif la démocratisation des systèmes dans le cadre de l'éducation permanente" (Résolution 1.111 du programme) se situent parmi les objectifs prioritaires de l'Organisation.

Conformément à ce mandat, la Division des politiques et de la planification de l'éducation a entrepris en 1977 la reproduction et la distribution de certains documents techniques, sous le titre général de "Rapports et Etudes ...". Cette série a pour objet de stimuler la réflexion et les discussions portant sur les problèmes courants auxquels doivent faire face les décideurs, les planificateurs et les administrateurs de l'éducation ainsi que les architectes scolaires. La distribution se limite aux professionnels du Siège et hors-Siège, ainsi qu'aux personnels d'institutions gouvernementales ou privées susceptibles de les trouver utiles pour leur travail. Nous espérons que cette série constituera un moyen pour promouvoir et augmenter la communication entre les individus et les institutions concernés par les différents aspects des politiques et de la planification de l'éducation.

Ces "Rapports et Etudes ..." se divisent en deux catégories: (i) les documents qui traitent d'un sujet (numérotés S.1, S.2, etc.) et (ii) les documents qui traitent d'un pays (numérotés C.1, C.2, etc.) Les premiers portent sur des sujets tels que les politiques et la législation de l'éducation, les techniques de gestion et de planification, la planification et l'étude des espaces, constructions et équipements éducatifs, la relation entre éducation/travail/emploi, la coopération entre les pays, le rôle de l'éducation par rapport au Nouvel ordre économique international, etc. Les seconds présentent des profils du système éducatif d'un pays donné (principalement les pays les moins développés), ou traitent d'une réforme ou d'un aspect spécifique du système éducatif du pays concerné.

Certains des documents reproduits dans cette série sont des "desk studies" basée sur des informations déjà existantes à l'Unesco, d'autres ont été préparés à l'origine pour servir de documents de base ou de discussion à des réunions ou séminaires, alors que d'autres encore, exprimant les positions personnelles des auteurs, se situent dans le cadre d'un dialogue permanent au sein du Secrétariat de l'Unesco.

Les documents sont choisis pour cette série en fonction de l'actualité du sujet traité. Les lecteurs doivent tenir compte du fait que beaucoup, sinon la plupart, des documents sont des documents de travail inédits et ne sont pas destinés au public. Certains auteurs ont rédigé ces documents dans une langue qui n'est pas la leur, ce qui explique certaines faiblesses linguistiques. Nous voudrions également souligner que les documents expriment les idées de leurs auteurs respectifs et ne reflètent pas nécessairement la politique de l'Unesco.

La Division des politiques et de la planification de l'éducation souhaite recevoir des commentaires ou suggestions au sujet de la série, et demande aux lecteurs de bien vouloir faire part de leurs réactions à certaines idées exprimées ou à des documents dans leur ensemble. Dans certains cas, il sera peut-être possible de reproduire ces commentaires et réactions lors d'une prochaine parution de la série. Les adresses des auteurs des documents sont indiquées afin de donner aux lecteurs qui le désirent la possibilité d'entre en contact avec eux.

RESUME

Les centres d'intérêt des planificateurs en politiques de l'éducation ont subi un changement radical au cours des deux dernières décennies: alors que pendant les années 1960, la planification traitait principalement de l'expansion de l'éducation en tant que facteur permettant de répondre aux besoins fondamentaux de la croissance économique le problème aujourd'hui consiste davantage à rendre l'éducation plus "efficace" à la fois en matière d'objectifs éducatifs, tels les performances scolaires des élèves, et d'objectifs socio-économiques, comme l'emploi et la répartition du revenu.

Nous nous concentrerons, dans ce papier méthodologique, sur le rôle de l'éducation par rapport aux objectifs de l'emploi dans les sociétés en développement. Etant donné qu'une importante recherche de base a déjà été entreprise autour du problème de l'éducation et de l'emploi, nous passons d'abord en revue brièvement ce que les principaux résultats révèlent. Néanmoins, il n'est pas évident que les preneurs de décisions soient vraiment au courant ni même intéressés par les sujets traités ou les résultats couverts par une telle recherche de base. Cependant, les institutions traitant des politiques de la planification développent en fait une quantité considérable de suggestions en matière de politiques dans le domaine de l'éducation et de l'emploi. De quelle nature sont ces suggestions et sur quel genre de méthodologie et d'informations s'appuient-elles? La seconde partie du papier examinera - là encore de façon succincte - cette documentation traitant des politiques éducatives, afin d'essayer de répondre à cette question.

Sur la base de ces deux examens, nous développerons une méthodologie simple afin de répondre à ce que nous considérons être les questions les plus pertinentes posées par les planificateurs en matière de politiques éducatives. Chaque fois que cela s'avèrera possible, nous traduirons cette méthodologie en résultats à partir de la recherche de base, c'est-à-dire que nous nous efforcerons de nous tenir à l'écart des voies dont nous savons déjà qu'elles ne seront pas très fructueuses.

The concerns of educational policy planners have shifted drastically in the last two decades : while in the 1960s, planning treated primarily educational expansion, with an eye to filling fundamental needs of economic growth, the issue today is more one of making education more "efficient", both in terms of academic goals, such as pupil performance, and economic/ social goals, such as employment and income distribution.

In this methodological paper, we will concentrate on the rôle of education in meeting employment objectives in developing societies. Since there has already been a significant amount of basic research on the issue of education and employment, we first review, briefly, what some of the main results of that research show. Nevertheless, it is not evident that policy-makers are particularly aware of or interested in the subjects and results covered by such basic research. Yet, policy-oriented planning institutions do develop an enormous amount of policy suggestions in the field of education and employment. What is the nature of these suggestions and on what type of methodology and data are they based? The second part of the paper will review policy-oriented documentation - again rather briefly - to attempt to answer this question.

On the basis of these two reviews, we will develop a simple methodology for answering what we consider to be the most relevant policy questions being asked by planners. Wherever possible, we will couch this methodology in results from the basic research; that is, we will try not to follow paths that we already know are not going to be very fruitful.

I. WHAT DOES THE BASIC RESEARCH SHOW

1. It is generally agreed among economists of education that overall employment(and unemployment) or the structure of employment (and unemployment) is not a function so much of the level of education in the labour force but rather of economic and social factors. In other words, raising the level of education in the labour force will not be a particularly important factor in reducing the level of unemployment, even though it may increase the employability of labour, when and if the economy develops. The level of employment depends more on the level of investment for production and on the kind of technology used - that is, the use of more labour-intensive or more capital intensive technology to produce a certain set of products. The fact that there is unemployment may depend on a number of factors : according to some economists, unemployment occurs because of distortions in the labour market, such as minimum wage legislation, labour unions, and government imposed hiring-firing constraints (Blaug, 1973). Others consider unemployment the result of development policies which concentrate on maximizing the return to capital rather than maximizing the employment of labour. Very few economists, however, consider that a major cause of unemployment is the "mismatch" of skills produced by the educational system with the requirements of the labour market (Carnoy, 1978).

2. There has been a prolonged discussion in the basic research on how labour markets actually function (see Carnoy, 1978, for a review). This discussion has important implications for educational planning. On the one hand, one group of economists considers that different people in the society with equal amounts of education are treated equally in the labour market. That is, if rural children - with all the social characteristics of a rural environment - or lower social class children in urban areas - with all the social characteristics of a low social class environment - are given the same schooling as higher social class urban children, they will have access to the same kinds of jobs and the same level of wages. This implies that the main problem in increasing the employment possibilities of the poor is to raise their level of schooling, give them more skills which are employable in the labour market. On the other hand, there is another group of economists that considers the labour market segmented, and people who work in the different segments of the market are treated

differently, even if they have the same education levels. The higher, or primary segment is characterized by relatively stable employment and high pay. The lower, or secondary segment, is characterized by frequent unemployment and relatively low pay. Furthermore, workers from rural and lower class urban social backgrounds - even if their formal schooling is increased substantially - are likely to end up in secondary jobs, and thus be subject to frequent periods of unemployment and receive relatively low pay, even though they have higher education than before. The problem, as seen by these economists, is not so much increasing the education of the poor - although that may be important also - as in changing the kinds of jobs that the poor have access to; in other words, changing the nature of employment itself.

3. The basic research shows that there has been a rapid increase in education in the labour force in most countries of the world and that this increase has certain characteristics : (a) On the average it has been more rapid than the expansion of skills required in the economy, so that in fact the rate of production of skills is catching up to and sometimes overtaking - in general terms - the educational manpower requirements of the economy. (b) Because of the structure of wages in most countries, and because higher education is usually free, there has been an incentive for students to take as much education as possible, particularly to continue on from secondary school to university. In many countries this has produced a bulge of university graduates who are often "over-educated" for the jobs which they end up doing. That is, they end up in work which is relatively simple or even requires skills that they learn primarily on the job, while the formal educational system served largely as a selection device. (c) The high level of unemployment in many developing countries has acted to increase the pressure on formal school expansion at the secondary and higher levels over what it would be with fuller employment. High unemployment, especially among youth, decreases the opportunity cost of continuing school, since job alternatives are not available. This process tends to accentuate "over-education" in the labour force at the higher levels of schooling, and increases drastically the funds needed for schooling, far beyond what would be spent in a full-employment economy. Unemployment therefore seems to have more of an effect on schooling than schooling on unemployment.

4. It appears that the nature of unemployment is considerably different among the more highly schooled than among the less schooled: the highly schooled, even when they cannot immediately find jobs on graduation or school-leaving, are generally unemployed at the beginning of their careers, during the job search. Then they usually find jobs which are stable and career-type, marked by relatively low levels of unemployment during the career. The less-schooled tend to greater probability of being unemployed often in their work life. Thus, if we look at the unemployed as a group, we find that unemployment continues to be a serious problem for the less educated throughout their work lives, while for the more highly educated, it tends to be a problem only at the beginning of their career. However, the results also show that the definition of "less" and "highly" educated changes over time in the same country. The rapid expansion of education relative to jobs noted above tends to push the definition of higher educated upwards: while ten years ago, for example, workers entering the market with secondary school education may have been able to find stable, low-unemployment career jobs, now this possibility is gradually being restricted to those who have attended university, and those with secondary school education find themselves increasingly in jobs marked by unemployment throughout their career. The problem in these unemployment-marked jobs is not education but rather the conditions surrounding those kind of jobs.

5. There are two special cases of unemployment which have also been considered: youth unemployment and women's unemployment. Youth have been found as a group to be displaced from the labour force as soon as, historically, enough qualified, mature adults can be found to hire. Correspondingly, as technology is developed which replaces labour in general, youth are the first to be displaced. (When the word "displaced" is used here, it is in the historical sense; that is, individual youth may not be displaced, but, as a group, we find increasing unemployment rates among youthful job seekers). As we have argued, this puts increased pressure on schools to expand, and schools are the greatest absorber of youth unemployment. In the case of youth, the role of schooling in improving chances for employment must be considered marginal except for higher educated youth. In this latter case, planning can be used to reduce job-seeking time and avoiding wasting resources on "over-educating" youth for jobs which do not require higher education.

Women's employment and unemployment is a very special case, and depends, in addition to more traditional labour market analysis, on the particular cultural conditions in a country, especially the rôle of the woman in the family (see Standing, 1978). In most developing economies, women are tied to child-raising, and so when wage agriculture expands in rural areas, there is usually a division of labour between men in wage labour and women staying in subsistence agriculture. In urban areas, the process of women's incorporation varies from society to society, but usually, unmarried women are very important participants in the industrialization process. It is only in later stages, as industrialization moves into a heavier, more capital-intensive phase, that women become less important in the urban labour force. But even then, the growth of a service sector may offset the decline in women's industrial labour by incorporating a large number of women. We also know that more educated women tend to have much greater measured participation in wage labour (for the most part, measured participation excludes subsistence farming). Yet, it is unclear whether simply increasing women's average education results in greater labour force participation, or whether there are presently more opportunities for women with higher education, opportunities which would not necessarily expand if the average level of schooling increased. Indeed, increasing women's average level of schooling seems to have increased women's unemployment, since higher educated women are more likely to seek wage labour. In any case, the education of women and their labour force participation merits special attention in any educational plan.

6. The "matching" problem - making education more efficient in matching training provided to jobs available - has relevance, it seems, in the case of the more highly educated: since their unemployment appears to be associated with job search rather than the nature of the jobs they do, more "relevant" schooling would reduce job search time and might reduce the possibility of having to take a job for which the graduate has been "over-educated". However, as far as the bulk of school-leavers, better matching as a way of reducing unemployment time does not seem appropriate, based on the results of basic research. Even most studies of vocational training at the secondary level show that in a high unemployment situation at the level, vocational education does not improve employment chances except for a marginal few.

7. The research results on non-formal education are not extensive, but those that have appeared indicate that graduates of non-formal education courses have a very different structure of employment opportunities than those who take formal education. Thus, although non-formal education's principal appeal is its low cost and "relevance" on the job market, the basic research indicates that non-formal and formal education are not interchangeable. In practice this means that extracting the skills component from formal schooling and teaching basic skills to both young people and adults may, indeed, provide them with skills at much lower cost than does formal schooling, but it does not get them access to jobs needing those skills. The flaw in the reasoning apparently comes from not accounting for the socialization and selection functions of formal schooling which are not included in non-formal education. Apparently, employers consider those with non-formal training less desirable (employable) than those with formal schooling. If planners consider this as "irrational" behaviour, they will have to change employers' minds. Furthermore, it should be recognized that non-formal education is generally aimed at workers with rather low levels of schooling, and hence tries to deal with the employment and productivity problems of workers who are largely in the low-paying, high employment, secondary labour market. This is why researchers have indicated that non-formal education can be successful only if it is accompanied by a corresponding local job programme to employ directly the recipients of such training (Coombs and Ahmed, 1974).

II. WHAT DOES THE POLICY RESEARCH SHOW?

Education and employment has been on the agenda of national and international policy-oriented institutions for most of the decade of the 1970s. What have been the concerns and positions of these policy-oriented groups and how do they correspond with the basic research? In reviewing documents which cover meetings of education ministers (see Final Reports of regional conferences of education ministers organized by Unesco), papers commissioned by the educational policy and planning division of Unesco, the World Employment Programme of the ILO, the research of the International Institute of Educational Planning (IIEP), the World Bank, and the policy papers of the OECD, we can classify policy concerns on education and employment into four broad categories:

(i) The relevance of education to social and economic development;

(ii) education and productive work;

(iii) the "mismatch" between school curriculum and available jobs; and

(iv) youth unemployment.

1. The relevance of education to social and economic development

Although particularly stressed by African countries, whose educational systems are still largely "left over" from the colonial period, the relevance of formal education to the kinds of work available to school leavers is a concern expressed on almost every policy document in the developing world. The focus of this concern is that school leavers are taught things in school which are not employable skills; that somehow the school is disconnected from the economy - from productive work. In this sense, the concern that the formal system is not producing marketable skills or even the right attitudes for work is directly connected to the three issues we discuss below: education and productive work, the "mismatch" between school curriculum and available jobs, and youth unemployment. However, in its "pure" form, the concern is voiced in terms of the overall nature of formal education and its relation to the economic and social development of a society, and this is what we shall discuss here.

The fact that formal education may be organized to produce a set of outputs which are not the set of "desired" inputs into economic development is expressed in the following way:

> It is an acknowledged fact that the educational systems left over from the colonial period do not correspond to the political options of the new African States, to their geographical, physical, and human situations, to their cultural traditions, to the requirements of development, or to their resources. This raises the problem of the need to make education more relevant to the African national context. Education for whom, and for what Purpose?
>
> The renewal of education is an eminently political decision which stems from the option that each individual country adopts with regard to the form of the society of the future and the type of person whom education should produce. In order to obtain objectives in this field, it is important to try to end the social and economic isolation of the school. (Final Report, African Ministers, UNESCO, 1976, p.21).

While this overall gap between the school and the desired society is particularly relevant to recently politically independent nations, the same argument is made with respect to the gap between urban schools and rural development and the irrelevance of primary education in urban areas to the reality of the job market for those graduates. Thus, basic education in rural areas is urban-oriented, with the result that students leave the school unprepared and uninterested in rural work; more important, the orientation of the schools at all levels is so abstract that students have little concept of what faces them in the work place, what kind of work is available, and the skills needed to find productive jobs directly from school.

The solutions posed to this problem focus on educational reform:

> The linking of school with life, or the integration of the school with the environment, means trying to make the school a motive force in the grass roots community. The school should not be a foreign body within the community but an emanation of it, organizing itself steadily for the community's development. This requirement, which should be reflected in its activities and in its physical appearance, also entails the linking of education with work. (UNESCO, 1976, p.22).

The model of reform in Africa which best fits this concept is the Tanzanian one; but it should be remembered that the Tanzanian reform was closely linked to attempts to re-organize the Tanzanian economy towards grass-roots, community-based agricultural production, and that the education reform was an integral part of the overall economic and political re-organization of Tanzanian society. (Maliyamkono, 1978) It should also be clear that the "irrelevance" of primary and even secondary education to available work may - as we discussed under the results of basic research - be part of the historical "qualification spiral:"

> Ten or fifteen years ago in many developing countries almost everyone who completed six or seven years of education ... could be fairly sure not just of a modern sector job, but of a clean non-manual modern sector job. Hardly anywhere, now, can one get such a job with less

> than nine or ten years of education and a secondary school certificate. In parts of South Asia college graduates compete unsuccessfully for routine clerical jobs with no great prospects. (Versluis, 1978, p.32)

And, while it is recognized that those who complete these lower levels of schooling are not particularly suited for productive life in agriculture or artisan crafts in the traditional sector where marginal-type jobs may exist and the technology is labour intensive, nor have they high enough schooling to enter the relatively small number of jobs in the modern sector. The results of research in the World Employment Programme, for example, question whether reforming education alone will have much effect on the employment of such school leavers:

> There have been countless attempts to develop 'relevant' curricula for rural primary and junior secondary schools which would provide a useful preparation for life within the traditional economy. They have rarely had much success. (Versluis, 1978, p. 32)

The ILO report goes on to argue that the school has been socially defined as the place where one prepares not for farming but specifically to get out of the agricultural sector. And with good reason: it is the modern sector jobs which societies reward with high salaries, social status, and job security. How, in fact, can it be envisaged to reform an educational system towards more relevance to existing work when the entire wage and status structure is oriented to rewarding traditional education inordinately?

This is even a problem in Tanzania itself, and in socialist countries like Cuba and now China. Furthermore, the ILO report argues, the schools themselves belong to the modern sector: "their buildings and furniture are generally patterned after imported models, if not actually imported; the contracts and modes of payment of their teachers follow the conventions of the civil service and of factories, not of traditional areas; the rhythms of the school conform to the imported seven-day week, not to the moon phases of local calendars." (Versluis, 1978, p. 32)

The World Bank also takes the view that although education increases the productivity of workers, the relation between education and employment depends only in part on the educational system. Other than education, the degree of balance between education and work can be improved, according to the Bank, by tempering the qualification inflation spiral and increasing job opportunities, including reducing the disparities in wages between the modern and traditional sectors, relating wages to job specifications rather than credentials, shifting from highly capital-intensive modes to more labour-

intensive approaches, improving rural infrastructure, and allocating a large proportion of development budgets to job creating activities (Education Department IBRD, 1979).

Yet, despite this very important recognition by many policy makers that the problem relevance of formal education systems to economic and social "demands" resides largely in the economic and social structure, the view that educational systems are not "efficient" in the attitudes, values, and skills they produce probably has some merit, inasmuch as educational bureaucracies have certain autonomy of control over the educational system, or inasmuch as the educational system is heavily influenced by a particular group in the society: perhaps the already educated elite of the modern production sector, or even, in some countries, the traditional religious institutions and a traditional landed elite. There is certainly enough evidence that shows the conflicts taking place over educational reforms to assume that even if a government were prepared to change both the nature of incentives in the labour market and the educational system, there would be severe resistance to such reforms. Therefore, it is not unreasonable to assume that unreformed educational systems might be serving to impede a "desired" economic and social development. The question, however, is to ask whether system-wide educational reforms would have a significant effect on employment opportunities, especially in cases where educational credentials are only important in the modern sector, a sector whose job market is limited to a small fraction of the labour force. Even in developed countries, the issue is heavily weighted towards policies in the labour market itself. The important issue as far as employment is concerned - as indicated in the ILO and World Bank approaches - is to identify those levels of schooling where educational reform plus labour market change are required to improve the employment situation for school leavers and graduates and those levels where educational "efficiency" changes alone could improve their employment possibilities.

2. Education and productive work

The concern of educational policy makers with the relation of formal education to productive work goes beyond the issue of more efficient education for employment. Nevertheless, the fact that schools seem to be producing graduates who do not fit in well into jobs, either because they do not have the skills which appear necessary to get work or because they do not seem to

have the right attitude towards work (for example, secondary school graduates who do not want to work in factories or primary school graduates who do not want to work in rural areas) gives rise to the whole education/productive work discussion.

The discussion in the policy literature has centred on aspects of the relationship:

(i) Preparation, in very general terms, for the world of work. For example:

> Some delegates indicated that in their societies, the philosophical basis for preparation of young people for life is mainly seen from the viewpoint of the school-community relationship .... The preparation of students for creative life in the community and providing them with basic skills to enable them to absorb specific training at a later stage was generally seen as a preferred strategy (Final Report, Asian Ministers Conference, UNESCO, 1978, p.44)

And,

> Very few people have been born with the love for hard work, especially manual labour of any kind. An appreciation of good workmanship, and good working habits such as orderliness, punctuality, cleanliness, trustworthiness, and co-operativeness has to be imparted to the children from primary school upwards. (UNESCO, Regional Office, Thailand, 1978, p.10)

(ii) Preparation for particular kinds of work by introducing a close industry-education linkage. For example:

> Some delegates suggested that a degree of responsibility for developing the linking mechanisms must lie with the economic sector, because it is industry and agriculture which profit most from the skills given to the individual Technical high schools which are affiliated to, and financed by, industry and on-the-job training thus help move some of the financial burden to industry. Other delegates recorded that in their countries links have been developed between educational institutions and industrial centres, but through a process of part-time work and part-time learning and/or a mechanism of recurrent education (Asian Ministers, 1978, p.45).

This close association between an educational institution and a work centre is indeed the Chinese and Cuban model of education and work, a model also applied - but not as successfully - in Panama. In Cuba, the secondary school itself is a work place, and furthermore, the output of the farms attached to the "schools in the countryside" or the industries in the vocational schools, are part of the national economic plan. At higher levels of schooling (upper secondary and university) students move between school and a place of work, where they have jobs associated with the particular career they have chosen. At the primary school level, children work part-

time in school gardens, and primary and secondary schools serving adults are located close to centres where the adults work during the day. Of course, this elaborate and highly developed education/work system is organized in a relatively full-employment economy, where youth can be employed 20 hours per week to produce while they are in school because they are not competing with unemployed adults. Youth can learn trades in industry as well as be trained academically in school because there are full-time jobs waiting for them when they graduate (Carnoy and Werthein, 1979).

UNESCO includes the possibility of including such work in the schools as a vocational preparation for future work roles:

> Socially useful productive work may be described as purposive, meaningful manual work resulting in either goods or services which are useful to the community ... such work must not be performed mechanically, but must include planning, analysis, and detailed preparation, at every stage, so that it is educational in essence (UNESCO Regional Office, India, 1978, p.7).

In its recommendations for India, for example, the most recent UNESCO recommendations hark back to the post-independence Basic Education reform as conceived and implemented by Mahatma Gandhi: work-based education organized around artisan schools. These schools were intended to redevelop craft-based industries in the villages, industries which had been destroyed by British colonisation.

(iii) Recovery of drop-outs and the unemployed through formal or non-formal education teaching particular skills.

> ... large numbers of pupils leave school at the end of each level without continuing education ... Those pupils need a type of education which is different from what is usually prescribed for those who continue their schooling. Work education or work experiences would be useful for those school leavers in their everyday living and as a basis for their future employment. (UNESCO, Regional Office, Thailand, 1978, p. 10)

The Thailand report goes on to describe formal and non-formal education programmes for the employed and unemployed in and out of school, including the Mobile Trade Training School (Thailand, p. 34) which in turn was analyzed and evaluated as having a different employment effect on its graduates than on the graduates of formal schooling (Papagiannis, 1977).

3. Youth unemployment

The particular problem of youth employment is a sub-heading of the general heading of education and productive work since, for the most part, the issue of education for work is a problem of youth. In his treatment

of the problem as the leader of a Presidential Commission, James Coleman argued that the schools are failing to provide attitudes and values for youth which incorporate them into the labour force as effective and productive workers (Coleman, 1973). The OECD, however, has taken the overall view (in the industrialized countries) that the absorption of unemployment and under-employment, and the improvement of prospects of obtaining a first job, are largely governed by the uncertainties about the rate at which the recovery of production will generate new jobs. If the hypotheses in the OECD growth scenario to 1980 are correct overall unemployment rates will remain at high levels, and the rate of unemployment will continue to be much higher among young people under the age of 25, who constitute between 20 and 50 per cent of all recorded unemployment. In general, the OECD has argued that the youth employment problem in the industrial countries cannot be solved by the educational system and that - as a result of past educational expansion - the selection which used to take place in the course of school life will, in the future, take place increasingly at entry into the first job. Nevertheless, aside from labour force measures the OECD is in the process of recommending a series of steps in education to improve the youth employment picture: assessing programmes in schools which relate to the transition between schooling and work, and, for the 19-24 year-old age group, to the transition between work or unemployment and recurrent education (the viability of alternating between work and study in order to gain access to higher education).

Although the ideas contained in OECD policy papers as well as the Coleman report on youth pertain to the highly industrialized countries, their conclusions and suggestions have relevance for the lower income countries as well: the emphasis on labour markets rather than education to deal with youth employment is fundamental. The work-study programmes, particularly for youth already in the labour force, are certainly applicable in the context of the general concern of education and working life. The de-emphasis, by the OECD, of Coleman's accent on attitudes towards work of young people in school as a distinct problem, bears noting: the attitudes of young people are generally a reflection of <u>realities</u> which face them in the labour market. Conditioning them better to those realities will not remove the realities themselves. Trying to give youth a better outlook on the large probability that they will not find interesting and rewarding

career jobs for many years after schooling (if at all) unless they are some of the lucky few who are allowed to take a university education does not change the fact that this large probability exists and that it is only the lucky few who are allowed to enter higher education. This indicates that policies pertaining to youth unemployment must focus on the nature of the labour market itself and the possibilities for youth to continue their education while already in the labour market, and on the nature of jobs. While education - including the increased vocationalization of education may be helpful to provide specific skills, the OECD de-emphasizes this specificily as well, arguing for more general skills to be taught in school to prepare you for rapidly changing conditions in the labour market. In that case, training programmes over and above formal schooling would be better suited to provide specific vocational training. This view is supported by evidence from South-East Asia that (at least in Thailand), there is high unemployment of graduates from vocational schools (UNESCO, Thailand, 1978). Certainly, this points to increased research on the whole issue of vocationalization of education and youth unemployment.

4. Education and "matching" schooling and jobs

There exists an important policy literature on the relationship between education and jobs as a planned "match" of graduates and school leavers to existing work in the labour market. While the OECD has now de-emphasized this aspect of education, other institutions, like the International Institute of Educational Planning, have carried on the earlier tradition of the OECD Mediterranean Regional Project (which included countries like Peru and Argentina). This tradition is rooted in manpower planning, and concentrates on deriving the demand for educated labour from labour/production input-output matrices and economic output projections. In a series of studies on African countries (Sudan, Tanzania, Zambia), the IIEP attempted to assess the success of manpower projections for university-trained labour, and to include a "qualitative" dimension into such projections by looking at the aspirations and expectations of university students and what was actually happening in the labour force. (Sanyal, et. al., 1976, 1977, 1978) The findings are interesting in that they show that there is often a "mismatch" between higher educated labour "needs" and the output of the university system even in a situation where there is a relative "shortage" of higher educated labour, very high relative salaries paid to university

graduates, and very high expenditures on university education. This type of situation would seem ideal for the improvement of the "match" between "needs" and educational output. One of the problems which the studies clarify is that often rhetorical "needs" - such as the need for more agricultural engineers, teachers or doctors - is not at all reflected in the relative salaries paid to different types of graduates from universities. If the government constantly emphasizes the "need" for such professionals in the development of the country's economy, why does not the public sector reward that kind of work by relatively high pecuniary or non-means? "Matching" requires a consistency between rhetoric and reality.

In this regard, it is also useful to note the IIEP studies on the structure of labour demand (Hallak, et. al., 1977, 1978) which concentrate on the technological structure of enterprises and their structure of demand for educated labour in Panama and Indonesia. The results of these studies - that certain types of firms (particularly larger versus smaller) have a different structure of demand for labour than others - has important implications for developing countries interested in the increase of employment of workers with different levels of education.

Furthermore, it is interesting to study European countries' planning of education for employment. Bertrand argues that - in France - the most important efforts to better the relationship between education and employment have been in the development of recurrent education, alone capable of adapting itself to the needs of professional and human development. This recurrent education is supported by the educational system itself and the enterprises. But, he adds, this type of planning is less applicable in countries where there is a much smaller modern sector and where constraints on the expansion of the educational sector are more difficult because of the enormous expansion of the school-age population. Nevertheless, he thinks that it is worth the effort to "match" educational curricula to available jobs in cases where there are "flagrant" disequilibria and in the case of matching general demand for different levels of education to the principal levels and types of education.

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We now turn to developing methodologies which can yield insights on these different aspects of the education-employment issue in developing countries.

III. RESEARCH METHODOLOGY FOR POLICY-MAKING

We have tried to establish some basis for doing research on education and employment at the local level by reviewing the results of basic and policy-oriented work done to date in this field. These results seem to show that policy makers would find considerable difficulty in trying to use educational planning to avoid unemployment of those with "lower" levels of schooling, but there may be some room for increased "efficiency" of education at "higher" schooling levels. It seems that the unemployment/employment problem for those with "lower" levels of schooling hinges largely on the nature of the labour market; on the overall existence of unemployment (or, conversely, the lack of full-time jobs) rather than their lack of appropriate training or skills. Put another way, it would be difficult to change the educational system in any minor way which would significantly increase the chances of "lower" education graduates to avoid unemployment. As the ILO reports so persuasively argue, the school system and the economic/social system are usually so organized to reward the highly educated with high-paying, secure, stable jobs. All others have to make do in a much more unstable, insecure, and lower paying set of jobs.

What this means is that 'lower' levels of schooling have to be seen in most societies as necessary for creating a highly literate, productive labour force as a social and economic base for development. Thus, the arguments for the expansion of those levels should be based on developing that labour force and on improving income distribution. But the expansion will only solve the unemployment problem in the sense that raising the average level of schooling keeps youth longer in school. The fact that the school system expands or becomes more productive or "efficient" (the average academic quality increases) is not very relevant to finding better jobs, unless the number of "good" jobs increases significantly relative to the number of people entering the labour force. On the other hand, higher quality education may make graduates more productive and more effective members of developing societies both when they are employed and unemployed. Therefore, reaching more people (both youth and adults) with high quality lower levels of schooling has its own purpose in developing societies. Also, reducing the cost of high quality schooling has its own purpose. But that purpose is only marginally associated with increased employment possibilities.

We have identified "lower" and "higher" levels of schooling. But what do these definitions mean? They will vary from society to society. This is the first order of business of any research effort on education and employment: We must come up with a meaningful "break point" between levels where efforts to increase the "efficiency" of schooling with respect to employment will be more fruitful, and where they will be less so.

Secondly, once "higher" levels of schooling are identified, how can they be made more efficient for employment? This entails an understanding of where there are "shortages" of this higher educated labour in the labour market, and where there are "surpluses". It also requires an understanding of how the labour market is going to be changed in the future, or, in cases where decision-makers feel that there are "distortions" in the labour market (see World Bank, 1979), how the labour market should be changed to meet social needs.

Thus, the methodologies we are going to propose will have to answer two questions simultaneously: (1) The nature of unemployment in an economy: whether the unemployment is (a) associated with job search; or (b) inherent in the job structure and in jobs themselves. (2) The levels of schooling associated with each kind of unemployment; in other words, who in the labour force tends to be unemployed as a result of looking for a career job, and who is unemployed because of the nature of the work he or she does.

Methodology I : Review of census data and other surveys

Many countries already have existing data which can yield employment/unemployment statistics by level of schooling, sex, age, industry worked in, and region. Not only that, but it is often possible to estimate changes in employment structure over time, using those same variables. Often, income statistics are also available, which permits the planner to estimate changes in the value attached to different kinds of work in the economy.

There are usually three sources of existing, relevant data to make such estimates: (a) census surveys; (b) household consumption surveys; and (c) employment surveys. The purpose of the first is to measure the characteristics of the population, but often includes information on a person's income, whether he/she participates in the labour force, his/her occupation; his/her education, age, and whether the person has been unemployed in the week previous to the survey. Census data on unemployment, it should be noted, are notoriously poor for measuring the actual level of unemployment,

and certainly tell us little about the nature of unemployment. Census surveys provide the worst coverage for exactly those portions of the population that are most likely to be unemployed. Even if they are accurate, those census surveys which ask the respondant whether he/she were unemployed in the previous week do not capture the fact that many workers are unemployed several different times during the year or are employed only part of the year. This should be kept in mind when using such surveys to measure unemployment.

The purpose of household surveys is multi-purpose, but usually hinges on the income and expenditure (consumption) patterns of the household. Such surveys are usually stratified by region of the country and sections of cities so as to capture differences between different groups in the society. Generally, household samples are more accurate in measuring people's income and employment/unemployment patterns than are census surveys. Their disadvantage, of course, is that they do not give us directly the overall structure of employment (or changes in employment patterns) in the country.

Employment surveys are designed to measure unemployment, so are usually based on the most developed questionnaires with respect to the nature and duration of unemployment. They are generally conducted at the household level, and are characterized by the same constraints as other household surveys.

What can we find out from these different surveys?

Ideally, we would like to have sets of tables like the ones illustrated in Tables 1 and 2. Table 1 represents a breakdown of unemployment, labour force participation, and average income for men and women by age and education. From that table, we begin to have a picture of the pattern of overall unemployment. Each of the three measures (open unemployment rate, labour force participation, and average income) indicates some aspect of incorporation into the labour force: open unemployment indicates the probability of someone in that age/education/sex/rural-urban category being in the market for a job (searching) but not finding one; the labour force participation rate indicates what percentage of the age/education/sex/rural-urban group <u>get</u> jobs in the <u>wage</u> sector; and average income of those participating in the wage sector indicates what the average <u>economic position</u> is of each group. We assume that as we move from the upper left hand corner of Table 1 to the lower right hand corner, the unemployment rate will decline for both men and women, and the labour force participation rate and average income

Table 1

Years of Education	Age (years) 16-19	20-24	25-29	30-34	35-44	45-54	55 +
Primary:							
0							
1-3							
4-5							
complete							
Secondary:							
7-8							
9 (complete lower)							
10-11							
12							
(complete higher)							
University:							
incomplete							
graduated							

Table 1 : For each category, calculate (a) unemployment rate; (b) labour force participation rate (number employed divided by population in that category); (c) mean income of those in the labour force.

One of these sets of tables should be made separately for men and women and separately for urban/rural (four tables for each of the three statistics).

Table 2

Years of Education	Occupations			
	Occupation Category 1	Occupation Category 2	Occupation Category 3---	Occupation Category N.
Primary:				
0				
1-3				
4-5				
Complete				
Secondary:				
7-8				
9 (complete lower)				
10-11				
12				
(Complete higher)				
University:				
incomplete				
graduated				

Table 2.: For each category, calculate (a) unemployment rate; (b) mean income; (c) number employed in that category.

One of these sets of tables should be made for each of the seven age groups shown in Table 1 and separately for men and women and urban/rural (28 tables in the set for each of three statistics).

will generally rise, except in the highest age category. Table 2 will give us information on unemployment, economic position by occupation for each age/education group separately for males and females and separately for urban and rural areas. We could (and should) make a similar set of tables by industrial sector (replacing occupational category by industrial sector).

Now, with this basic information, we can at least begin to identify the relationship between education and employment/unemployment. It should be noted that the education categories shown in Tables 1 and 2 are only illustrative, since for each country, the relevant education categories will vary. Also, it would be advisable to add some detail to the educational categories: for example, the planner may want to compare those who have taken vocational secondary schooling with academic secondary; a special study may be necessary for the university level, in which courses of study within the university are identified, and the statistics calculated for those who have followed each course of study, incomplete and completed. Once all these details have been worked out and the statistics collected and estimated in the forms of Tables 1 and 2, this is what we can say:

(a) Using the unemployment percentage as a low estimate of the economy's difficulty in absorbing people looking for jobs, and the labour force participation percentage as the high estimate of this difficulty, we can separate those levels of schooling and age groups where the labour market is relatively "tight" and those where the labour market is "loose". For example, if male primary school graduates in urban areas show open unemployment of 5 per cent and labour force participation of 85 per cent even for the 25-29 year-old age group, and these figures are similar for those who attended the first years of secondary school, we would guess that at those levels, increasing the "relevance" or efficiency of the educational system would not improve the employment situation very much. This guess would be supported by low salary figures for these education/age categories. The point here is that significant unemployment rates/relatively "low" labour force participation/low incomes throughout the first ten years of work, indicates that the labour market for that general category of labour is weak compared to the number of people seeking jobs in it. At higher levels of schooling we would expect considerably higher labour force participation and lower unemployment rates already in the late twenties

age group, or even younger for secondary school graduates in most countries. We would also expect higher incomes for the higher educated, yet part of this may have nothing to do with market conditions, but rather with social convention: since those with higher education are in a more powerful economic/political position in the society, they may exert their power to excessively reward those levels of education with higher incomes. All in all, then, we can locate unemployment and low pay through Table 1, and begin to understand whether unemployment is a phenomenon of youth (career job search) or is endemic - at certain educational levels - to the nature of the jobs people hold.

(b) With Table 2, this problem can be further specified : with the unemployment rates in Table 2, we can see whether high unemployment rates are inherent in a particular age group(s) across occupations and most education categories; whether unemployment is inherent in a particular education category across jobs and ages, or whether certain occupations are marked by high unemployment/low income across education and age groups. This latter case would give the strongest evidence that certain occupations (or industries, in the case where Table 2 is constructed using production sectors rather than occupational groups) are marked by high unemployment/ low income among those who work in those occupations/industries. However, what we think planners will find is the following: high unemployment rates will be rather concentrated in certain broad occupational and industrial groups, and the people in those occupation/industries will tend to be young people and women with relatively low education. In other words, the three problems will be inter-twined and rather inseparable.

(c) With a finer occupation and/or industry breakdown in Table 2, a closer identification can be made of those occupations and industries into which it would be less productive, from an employment point of view, to steer graduates, and those where the probability of finding immediate employment would be greater. For example, if we find that particular occupations which are taken - in relatively high percentage - by workers with secondary schooling have low unemployment rates and relatively higher pay even for young workers these would be the occupations and industries into which to orient those students who complete some secondary education and no more.

(d) All these results take on a more dependable character when the data (Tables 1 and 2) are available at two points in time, five or ten years apart. If the planner has available results for two such points in time, it would be possible to have some indications how the patterns of unemployment, labour force participation, and income are changing over time, if at all. Are unemployment rates rising or labour force participation falling? Are shifts in unemployment/labour force participation occurring between different education categories? Specially, is unemployment increasing (decreasing) in higher education categories over time? In other words, is the education spiral moving unemployment up? Are certain occupations being affected particularly?

Methodology II : Cross-section employment surveys

One of the problems with using already existing census data and household survey data is, as we have noted, that the measures of unemployment rates used is generally not very accurate. We have suggested using labour force participation rates and average incomes of those seeking or holding work as alternative measures of employability, but this does not solve the problem as well as could be achieved with a survey carried out (even among those who hold jobs) which asks job and employment history. Such a survey could be taken at the level of enterprises, and could produce all the same information of Tables 1 and 2 except labour force participation rates (since everyone surveyed would be currently working). In addition, however, we could produce a Table 1 with the average number of paid weeks worked per year in the previous year and in the previous two years. We could also construct a Table along the lines of Table 3 (see next page). In that Table, we have three indicators of unemployment and employment stability by education, age and sex. The first gives us search time for first job, which indicates a specific type of unemployment, one which might be reduced by educational planning (the planner will probably want to have a more detailed educational breakdown than shown here), if the other two indicators show a trend towards job stability. Thus, if the number of months in present job is relatively high for the age group and/or the number of weeks unemployed in the last year is low, while search time for first job was high, that educational category would be one where educational policy may very well reduce search time and hence early unemployment.

Table 3

Year of Education	Search time for first job (months)	Number of months in present job	Number of weeks unemployed in last year
Primary:			
0			
1-3			
4-5			
complete			
Secondary			
7-8			
9 (complete lower)			
10-11			
12 (complete higher)			
University			
incomplete			
complete			

Table 3 : A table should be made for each age group and separately for men and women, urban and rural.

Employment surveys can also give detailed information on job history, so that the planner can get a much more accurate picture of what is happening in the job market, especially when the analysis is restricted to people under thirty-five. Job histories will tell us, for example, how people reached their present jobs, whether they started directly in career jobs or passed through a stage of high unemployment, unstable work before entering more stable types of jobs, or whether they have always been in unstable, high unemployment-type jobs. The very positive characteristic of employment surveys carried out in enterprises is that in countries where there are relatively few existing data on employment/unemployment/income/labour force characteristics, the enterprise survey can be done relatively quickly and cheaply by selecting even a large number of firms at random from a list of firms in the country as a whole or in major cities, where firms are stratified by size (number of employees) and random sampling is carried out within each stratum. Such surveys have been carried out in a number of countries by individual researchers in a relatively short period (see Thias and Carnoy, 1972; Carnoy, 1967; Blaug, 1971; Pak Wai Liu in Carnoy, 1978). The basis for such a survey is a short questionnaire which is applied to all workers in the chosen firms. The information gathered covers personal characteristics, including socio-economic background, education, age, sex, type of schooling, when finished school, etc.; job history, including characteristics of present job; unemployment information; income, and characteristics of the firm in which the worker is employed. These data then form the basis for the resulting Tables of the type 1, 2 and 3.

Methodology III : Tracer Studies

If we are particularly concerned with the type of unemployment suffered by different kinds of workers, the most accurate survey data comes out of tracer studies. Such studies based on households and using household survey techniques, choose a random sample of individuals in relevant age groups who might enter the labour force over the following one year, two years, or five years. These individuals are then re-contacted over the following year as much as every three months and their unemployment and job histories are recorded. Thus, at the end of a year, the planner already has considerable and highly accurate data on the employment patterns of people who start out the year both in and out of the labour force.

For example, the survey might start in March of a given year. If the survey is restricted to those between the ages of fourteen and thirty, we would find in the sample, students, those in the labour force, those in the labour force and unemployed (but searching for a job), and those not in the labour force and not in school.

By June, when the next quarterly survey is taken, we would find students who have left school and are looking for a job, but unemployed, students who have found jobs, students who are still not looking for jobs, unemployed who have found jobs, employed who have lost jobs, etc. In September, we would have a new set of data, and so on. Since respondants would be asked to give information about what happened in the previous three months, the planner would have a good picture of a typical year in the lives of his respondants of different ages, and particularly of the employment/unemployment patterns of the 14-30 year-old age group, men and women, and, if the sample is taken in urban and rural areas, of the differences between those two sectors of the society.

The tracer study has special relevance for those higher levels of education defined above where there is unemployment due to poor educational planning; i.e., students have high enough levels of education to find some job, but this job is unnecessarily difficult to find because he/she has chosen a course of study which does not give immediate access to ready jobs, but rather requires a long search time. Tracing individuals who are currently attending these higher levels of school - for example secondary and university students scheduled to graduate in the same year as the tracer study is done - enables the planner to have a picture of what happens to these students in the year following graduation. Such a study would not be initially conducted on the basis of households but rather in the schools themselves. Then the students would be re-contacted at their homes three months later, six months later, etc. In the initial survey, the questionnaire would obtain information on their socio-economic background, course of study, their academic performance, and perhaps even career and income expectations. In the follow-ups, the questionnaire would be centred around actual job situation, search time, etc. This would give the planner details about which courses of study are easily employable and employable in jobs which utilize the skills learned in school, and which courses of study produce graduates who are in

difficult employment situations. It would be important to compare this information with two other kinds of information: (a) the socio-economic origin of the students and the courses of study which they follow: for example, humanities graduates are often considered as difficult to employ, but it may be difficult to shift those who follow the humanities course into other types of courses (more employable) unless those latter courses taught in the evenings to allow lower socio-economic origin pupils who usually work during the day to attend those courses; (b) changes in the labour market over time: at any given moment of time, certain kind of jobs may be easily employable, and others not, but this picture may change over time, especially when one considers that by the time changes are made in the higher education system to respond to the findings of a survey today, the employment picture may have changed entirely. Thus, the conditions in which the survey findings are placed have to be analyzed along with the findings themselves.

With these three types of methodologies, we feel that the planner will be able to develop criteria for a general education and employment policy. In the first set of studies - amassing information from existing surveys - the planner can discover which levels of schooling are associated with high unemployment rate or relatively low level of wage labour participation which cuts across age groups and occupations, and which levels of schooling are associated with low rates of unemployment/high participation rates/high incomes, irrespective of age group or occupation or industry. In between, he will find a level of schooling which could be said to be in transition - its graduates' possibilities deteriorating from a stable to an unstable employment situation, especially in countries where the rate of expansion of the educational system has been rapid, and the average level of formal schooling in the younger age cohorts entering the labour market, also rising rapidly. The planner will have to determine from the surveys whether more recent graduates with higher levels of education are "replacing" older workers with lower levels of schooling, particularly in modern sector jobs. Is the average level of schooling rising rapidly in modern sector jobs? How does this compare to increases in the average level of education in agriculture and unskilled service jobs? (Even if the surveys are not available in two different time periods, the planner can infer these results from changes taking

place in the same occupation between older and younger workers). It is in the context of such changes that the "matching" problem has to be placed. Obviously, the planner cannot very successfully argue for a reorganization of the educational system in favour of very specific vocational schooling at a level of education whose graduates' labour market situation is changing rapidly. The most "vocationalization" of formal education is at levels where there is a rather stable (or increasing) demand for specific kinds of skills, and the jobs requiring those skills are relatively highly paid.

Methodology IV: Evaluation of special programmes

Until now, we have been discussing methodologies which serve as the basis for planning a more "efficient" relationship between education and the job market. With the data and tables discussed above, the planner can assess at which level of schooling to concentrate in improving the match between what the educational system is doing and what the job market is demanding, and to determine how to change that level (or levels) of education so that its graduates are better matched to the job market.

But in addition to these system changes, planners are also interested in assessing the effectiveness of programmes already in place. For example, many countries have vocational education programmes, short-course non-formal education, and, in some countries, special training programmes for youth and schools which combine formal schooling and productive work. How does the planner analyze the effect of these programmes on employment?

We will make two fundamental propositions: regarding the assessment of such programmes: (1) They should not be evaluated without a comparison group. The general type of data developed in Methodologies I, II, and III are essential for this purpose. How can the planner tell, for example, how well a vocational training programme is functioning to increase employability, if he cannot compare the programme with normal academic training at the same level. In order to do this, he should compare the employment results (at least the search time, type of job taken, and income) for "similar" graduates of the vocational education programme with the graduates of academic programmes at the same level who enter the labour market. "Similar" graduates means students taking academic education who have similar socio-economic background, educated in the same region of the country, with the same number of years of schooling, and - if it is possible to obtain those data - approximately the same performance in school.

(2) Since we are concerned here with evaluating the special programme with an "ordinary" academic programme at the same level, in terms of its employment effect on the graduates, we believe that the only way to make this comparison is, in effect, to trace into the labour force the individuals who follow the two programmes. At the least, the individuals should be traced into their first job after schooling and/or schooling plus the special programme.

Example 1 : Short-course non-formal education

Let us assume that we would like to evaluate a short-term non-formal education course in a rural area, a course in which either adults or youth are taught skills related to agriculture. It is not enough to assume that such skills increase the productivity of those who learn them, or increase their income (in the agricultural sector, often marked by under-employment rather than unemployment, income is a rather good measure of "employment"). A study which evaluates such a programme should compare the type of work done before and after the non-formal education by the participants, and their income (or output) before and after, and, at the same time compare their type of work afterwards with those "similar" workers who have completed the same amount of formal schooling as the course participants. A comparison could also be made with those "similar" workers who have completed - let us say - an additional year of formal schooling. In this case, "similar" would be defined as an agricultural worker from the same region, of the same age and sex as the course participants.

Example 2 : Education and work programmes:

How would we evaluate a programme of education and work? Let us assume that some secondary school students have been working part-time while going to school and others have not. We could design a study which takes a random sample of secondary school students who work part-time and a comparison sample of secondary school students with approximately the same socio-economic background, in the same region, of approximately the same age, and approximately the same academic achievement, and trace both of them into the labour force after leaving school or graduating. In the first instance, we could measure the relative difficulty for each group of finding an initial job, and the type of job they found, including the initial income they earned. We would expect that those students who worked would do much better on both counts because of their previous work experience.

Further follow ups (after two years, for example) would give us additional information on how well the two groups are doing later in their careers.

Alternatively, we could sample a group of secondary school graduates - let us say 25-29 years old - already in the labour force (through an enterprise survey like in Methodology II), asking them their personal characteristics, search time for first job, their job history, where they went to school, their income and the type of job they are presently doing, and to describe whether they worked and what kind of work they did while attending secondary school. The planner could then compare the search time and job history (including income profile) of those secondary school leavers and graduates with similar socio-economic backgrounds who worked while in secondary school and those who did not. Although in this latter type of study, the academic performance in school of the two groups is not accounted for, the planner would still have a rather good picture of the employment value of working while in secondary school. With this picture, he could assess the value of incorporating such employment experience into a secondary school programme. Of course, it should be recognized that in an economy with significant levels of unemployment, incorporating large numbers of secondary school students part-time into the labour force raises considerable difficulties for older workers themselves seeking jobs. Since these young students are undoubtedly willing to work for much lower wages than are older workers, the competition set up by bringing younger workers in under government programmes could be disasterous for workers already in the labour force. These limitations must be kept in mind in any education and work programme.

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This brief overview of research methodologies for planning education for employment can only hope to introduce the planner to the type of data collection which will facilitate making changes in the educational system for improved employment possibilities for the system's students. Ultimately, as we have stated again and again, educational planning for employment hinges on understanding the relationship between the educational system and the labour market in an economy, not in terms of ideals, but in the reality of the way the system works. Planning in terms of ideals or mythology cannot hope to do more than produce more rhetoric or waste precious resources. And once the reality is accepted, the educational planner will ultimately be drawn to the conclusion that educational planning for employment must be carried out in terms of a determined effort for full employment in terms of labour market policies themselves, in co-ordination with the development of the educational system.

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